

Work Order ID 78639

\*78639\*

Page 1

January-12-12 7:49:41 AM

Item ID: D206-642-151

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Replacement Skidtube

Start Date: 12/01/2012 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: M.L.S

Date: 12/01/12 Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3804	A								
IIN-D206-642	O								

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-151 CHG001

N/A CK 12/2/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 78639****\*78639\***

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**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube

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**\*1\***

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Required Date: 26/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00

**\*110\***

Skidtubes

0.00

Skidtubes

**Memo**

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty Part Number DescriptionBatch

A/R Aluminum Rod

M119712/M119785

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 &amp; DT8169D &amp; DT9771.

9-Locate DT8732 from inner Aft saddle hole &amp; 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 &amp; D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 &amp; doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

{SAD 12-01-17 (1)

B6 12-01-24

DL 12/01/25

DL 12/01/26

W/O:		WORK ORDER CHANGES					
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Revision ID:

Stop \*NS2\*

Item Name: Replacement Skidtube

Start Date: 12/01/2012 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.  
\*\*\*\*no wearplate holes for this skidtube\*\*\*\*

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00

\*120\*

QC

Memo

0.00

Quality Control

5126126

12/01/26

44

W/O:		WORK ORDER CHANGES					
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Customer:

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

**\*140\***

HandFinish

Memo

0.00

Hand Finishing

*Re* 12/01/26

150

QC3- Inspect Part Finish

0.00

**\*150\***

QC

Memo

0.00

Quality Control

*DP* 12-1-26

160

Skidtubes

0.00

**\*160\***

Skidtubes

Memo

0.00

Skidtubes

1-Open holes to finished size as per Dwg D3804, (without cutting fluid)

2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)

3-Deburr and blow out all chips from inside the tube

*Re* 12/01/26

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

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Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170 QC6- Inspect dimensions to drawing 0.00

**\*170\***

QC

Memo

0.00

Quality Control



12-1-26

180

0.00

**\*180\***

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-1 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting

Start Date: 12/01/26 Time: 4:20


Finish Date: 12-01-30 time: 9:00

Pick:

Qty Part Number Description Batch

A/RSikaflex-291 119999

Sikaflex expire date: 12/08/13

 12/01/26

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

**\*190\***

QC

Memo

0.00

Quality Control

1 0 BE 12-01-30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Item Name: Replacement Skidtube

Start Date: 12/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

0.00

**\*200\***

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-remove alodine from around hole and prepare for welding

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

QtyPart NumberDescriptionBatch

A/RAluminum Rod M119785

3-Grind welds flush as per Dwg D3804.

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.402" before welding other side. Use SS rod as required.

A/RSS Rod NONE

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

3 BE 12-01-30

BB 12/1/30

DD 12-1-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*78639\***

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**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 12/01/2012    **Start Qty:** 1.00    **\*1\***

**Cust Item ID:**

**Required Date:** 26/01/2012      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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210

0.00

**\*210\***

## HandFinishing

0.00

HandFinish

## Memo

## Hand Finishing

Install D2680-041 Nut Plate as per Dwg D3804

215

QC9- Inspect visual per QSI004- Fusion Welds	0.00
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0.00

**\*215\***

## Memo

0.00

QC

## Quality Control

220

QC10- Inspect visual per QSI004- ground welds	0.00
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0.00

**\*220\***

## Memo

0.00

QC

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Skidtube

Start Date: 12/01/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 1.00 **\*1\***

Customer:

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

QC5- Inspect part completeness to step on W/O

0.00

**\*230\***

QC

Memo

0.00

Quality Control

8.12/131

240

Pressure Wash per QSI005 4.3

0.00

**\*240\***

HandFinish

Memo

0.00

Hand Finishing

1 BK 12-2-1

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

**\*250\***

Powdercoat

Memo

0.00

Powder Coating

START TIME:  
OVEN TEMPERATURE:  
FINISH TIME:2:45  
320 °F  
3:15

1X4 M-12/02/01

m119480

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
260	QC3- Inspect Part Finish	0.00							
*260*									
QC	Memo	0.00							
Quality Control									
270	HandFinishing	0.00							
*270*									
HandFinish	Memo	0.00							
Hand Finishing	<p>1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.</p>								

W/O:		WORK ORDER CHANGES					
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Stop

\*NR2\*

Sequence ID/  
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Description

Set Up/  
Run Hours

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Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

280

0.00

\*280\*

HandFinish

HandFinishing

Memo

0.00

Hand Finishing

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive  
A/RSikaflex-291 11/19/08  
Sikaflex expire date: 12/08

2- Install wearplate as per dwg

2-Wing Walk as per Dwg D3804 and QSI 005 4.4  
Batch: 11/12/08

1 Wt

BR 12 2-15

290

QC3- Inspect Part Finish

0.00

\*290\*

QC

Memo

0.00

Quality Control

Sizler

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

300

QC5- Inspect part completeness to step on W/O

0.00

**\*300\***

QC

Memo

0.00

Quality Control

310

Packaging

0.00

**\*310\***

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D206-642-151

Location:

PPP Rev:

PPP 76698

320

QC21- Final Inspection - Work Order Release

0.00

**\*320\***

QC

Memo

0.00

Quality Control

*12/12/17*

*OK 12/02/17*

*W 12.02.17*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

January-12-12 7:49:44 AM

Page 1

Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC  
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2620

Manufactured

No

110

Each

18.0000

1

1

**\*D2620\***

Skidtube, 206 Skidtube

\*\*

SAD 12-01-17

Location

Loc Qty

Loc Code

LG

18

71616

1

71617

6

75587

2

76815

1

76817

5

76819

3

B77998

①

D2647

Manufactured

No

110

Each

158.0000

1

1

**\*D2647\***

Cap

\*\*

BE20/29

Location

Loc Qty

Loc Code

LG002

158

73826

49

75482

109

1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-12-12 7:49:44 AM

Page 2

Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-04

Purchased

No

180

Each

11,453.00

52

52

**\*CR3212-4-04\***

Cherry Rivet

\*\*

DC 12/01/26

## Location

## Loc Qty

## Loc Code

ST331

1463

116471

78

117816

3

118686

1

118840

16

119017

1355

119075

10

st510

9990

119075

9990

D2654-1

Manufactured

No

180

Each

13.0000

1

**\*D2654-1\***

Web

\*\*

DC 12/01/26

## Location

## Loc Qty

## Loc Code

LG

13

76756

5

76757

2

76758

6

D3286-1

Manufactured

No

180

Each

126.0000

2

**\*D3286-1\***

Doubler

\*\*

DC 12/01/26

## Location

## Loc Qty

## Loc Code

LG002

128

74872

6

75484

4

ST046

-2

76772

116

January-12-12 7:49:45 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

January-12-12 7:49:45 AM

Page 3

Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

200

Each

580.0000

19

19

**\*D2649\***

Cross Bolt Spacer

\*\*

*BE12-01-30*

*B 78020 x 19*

Location

Loc Qty

Loc Code

LG

400

77574

400

LG001

180

65317

1

68224

2

68507

11

71355

2

72704

2

72841

11

73390

8

73857

21

73858

53

73859

4

73860

4

76793

61

D3286-3

Manufactured No

200

Each

170.0000

2

2

**\*D3286-3\***

Spacer

\*\*

*BE12-01-30*

Location

Loc Qty

Loc Code

LG

100

78015

100

LG001

70

74117

1

76773

69

*2*

January-12-12 7:49:45 AM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-12-12 7:49:45 AM

Page 4

Work Order ID: 78639

\*78639\*

Parent Item: D206-642-151

\*D206-642-151\*

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2680-041

Manufactured No

210

Each

135.0000

1

1

\*D2680-041\*

Nut Plate

\*\*

①

BB 12/01/30

## Location

## Loc Qty

## Loc Code

ST013

39

75479

39

ST019

96

76790

96

CR3212-4-03

Purchased

No

210

Each

1,706.000

2

2

\*CR3212-4-03\*

Cherry Rivet

\*\*

②

BB 12/01/30

## Location

## Loc Qty

## Loc Code

FP002

716

114859

716

ST331

990

110139

2

119017

988

AN960JD416

NAS1149D0463J

Purchased

No

210

Each

0.0000

1

1

\*AN960JD416\*

Washer

\*\*

②

M118384 (x1) 12/02/06

CCR264SS3-3

Purchased

No

210

Each

937.0000

2

2

\*CCR264SS3-3\*

Cherry Rivet

\*\*

②

BB 12/01/30

## Location

## Loc Qty

## Loc Code

ST331

937

113973

2

117849

139

119017

796

January-12-12 7:49:45 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

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Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

296.0000

1

1

**\*MS27039-4-06\***

Screw

\*\*

12/02/06

Location

Loc Qty

Loc Code

ST292

296

119075

296

X1

D2651-1

Manufactured

No

270

Each

177.0000

6

6

**\*D2651-1\***

Plug

\*\*

378124 (x6) 12/02/06

Location

Loc Qty

Loc Code

FP001

177

57869

1

66445

10

69018

2

70839

2

71037

31

73827

131

D2651-3

Manufactured

No

270

Each

2,667.000

6

6

**\*D2651-3\***

O-Ring

\*\*

12/02/06

Location

Loc Qty

Loc Code

FP001

667

61962

12

73828

655

y6

FP-A

2000

78126

2000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 6

Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3873-1 Manufactured No

280 Each

775.0000 14

14

**\*D3873-1\***

Bushing

\*\*

12/02/06

Location

Loc Qty

Loc Code

ST088

775

64760

1

68247

4

73829

19

73830

2

76792

249

78017

500

14

D2646 Manufactured No

280 Each

119.0000 1

1

**\*D2646\***

Aft Cap

\*\*

12/02/06

Location

Loc Qty

Loc Code

FP002

119

62678

5

68280

5

70945

1

71038

4

71070

2

73294

1

73825

101

1

D3805-041 Manufactured No

280 Each

9.0000 1

1

**\*D3805-041\***

Wearplate Assembly Fwd, Low Gear

\*\*

12215

Location

Loc Qty

Loc Code

FP001

9

75488

6

75489

3

1

January-12-12 7:49:45 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

January-12-12 7:49:45 AM

Page 7

Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

280

Each

1,037.000

2

2

**\*MS27039-1-08\***

Screw

\*\*

12/02/06

Location

Loc Qty

Loc Code

ST291

1037

117423

77

118910

86

119075

374

119109

500

x 2

MS21042L3

Purchased

No

280

Each

6,081.000

7

7

**\*MS21042L3\***

Nut

\*\*

12/02/06

Location

Loc Qty

Loc Code

ST300

6081

117441

16

117885

32

118451

5

118927

3

119017

5551

119075

474

x 7

D3805-045

Manufactured

No

280

Each

10.0000

1

1

**\*D3805-045\***

Wearplate Assembly Aft, Low Gear

\*\*

1376788 Cx4 12/02/06

Location

Loc Qty

Loc Code

FP001

10

73817

1

74896

1

76783

8

AN960JD10L

NAS1149D03321

Purchased

No

280

Each

0.0000

2

2

**\*AN960JD10L\***

Washer

\*\*

1119042 (x2) 12/02/06

January-12-12 7:49:45 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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# Picklist Print

January-12-12 7:49:45 AM

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Work Order ID: 78639

**\*78639\***

Parent Item: D206-642-151

**\*D206-642-151\***

Parent Item Name: Replacement Skidtube

Start Date: 12/01/2012

Required Date: 26/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN3-37A Purchased No

280 Each

1,371.000 7 7

**\*AN3-37A\***

Bolt

\*\*

*u* 12/02/06

## Location

## Loc Qty

## Loc Code

ST353

1371

117619

4

119086

1367

*X7*

NAS1149D0363J

Purchased

No

280 Each

3,266.000 7 7

**\*NAS1149D0363.J\***

Washer

\*\*

*u* 12/02/06

## Location

## Loc Qty

## Loc Code

ST298

3266

117601

61

118077

1

118612

18

118968

26

119537

1160

120142

2000

*X7*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

#### NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

SHOWN  
KIDTUBE  
UNCONTROLLED  
SUBJECT TO  
WII

NO. 78639 M.C.J.  
12/01/12

RELEASED  
UP 09.03.03  
per ECU 09-530

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	99		
DRAWN	1		
CHECKED	1		
MFG. APPR.	1		
APPROVED	1		
DE APPR.	1		
DATE	08.07.07		

DART AEROSPACE USA, INC	
PORT HADLOCK, WA	
DRAWING NO.	REV. A
D3804	SHEET 1 OF 5
TITLE	SCALE
SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

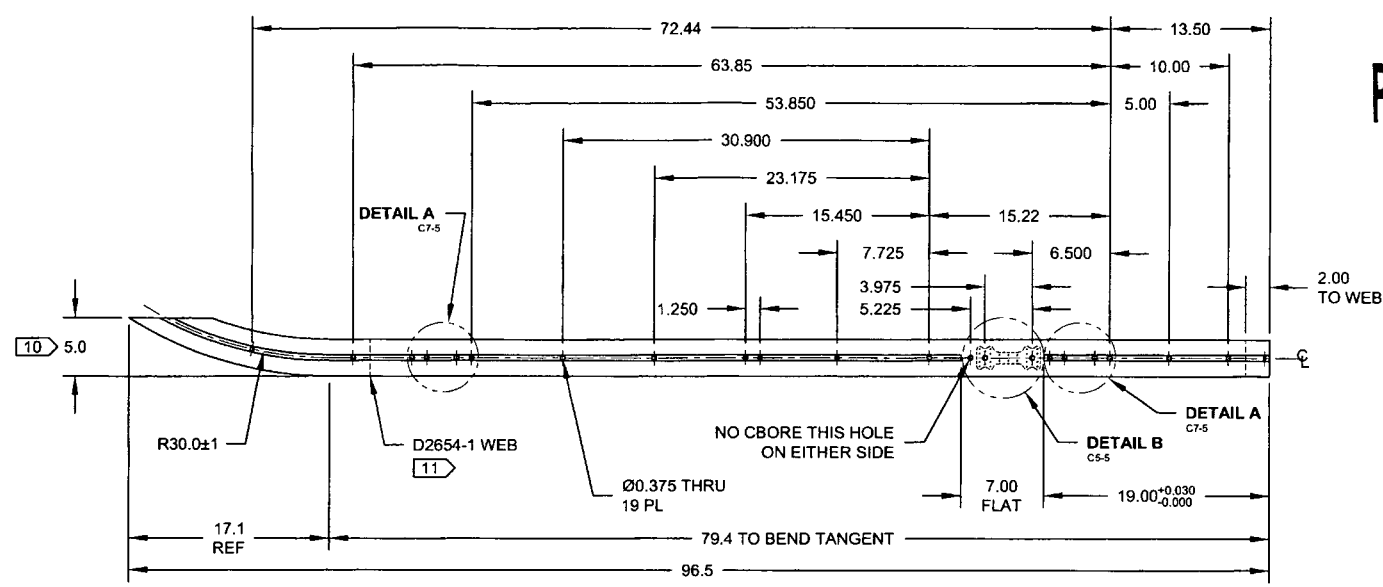
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

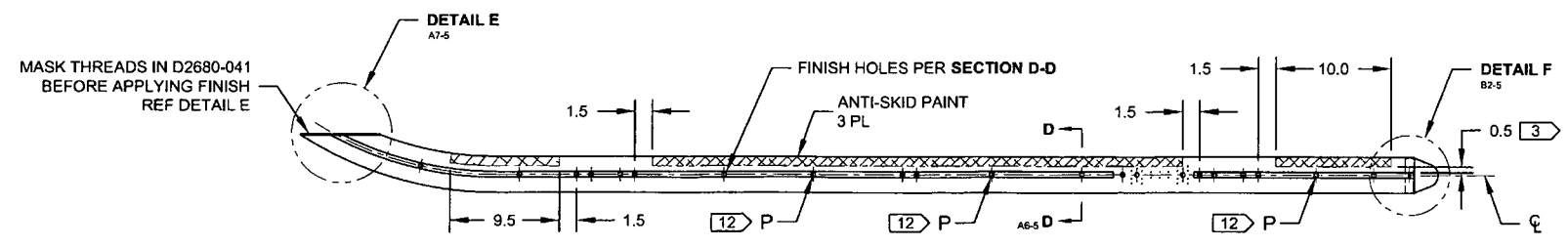
**NOTE:** Date & initial all entries

78639

RELEASED  
09.03.03



**D3804-041 BENDING/DRILLING DETAIL**



**D3804-041 ASSEMBLY/FINISHING DETAIL**

DESIGN	97	<b>DART AEROSPACE USA, INC</b>	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 2 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
09.03.03



DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN		PORT HADLOCK, WA	
CHECKED	91	DRAWING NO.	REV. A
MFG. APPR.	91	D3804	SHEET 3 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

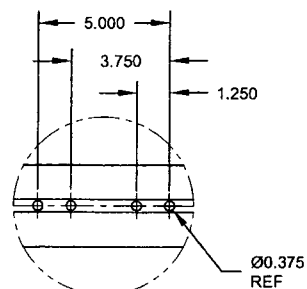
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

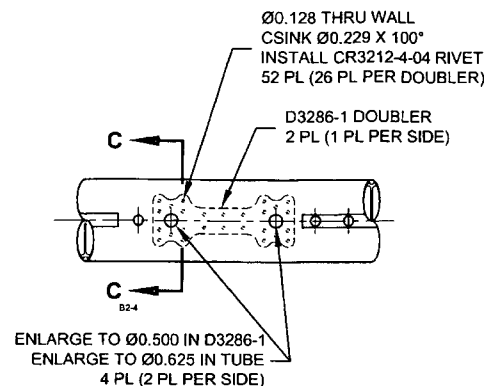
**NOTE:** Date & initial all entries

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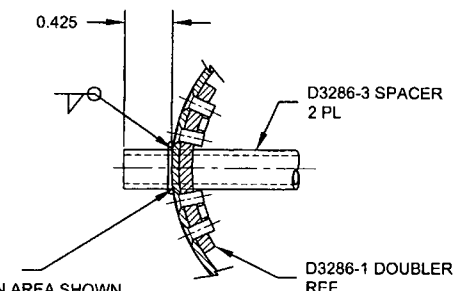
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UP 09.03.03



**DETAIL A**  
SCALE NONE  
D6-2  
C2-2  
D6-3  
C2-3

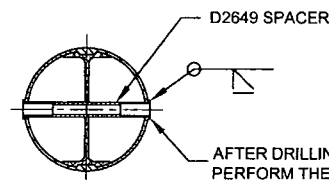


**DETAIL B**  
SCALE NONE  
C3-2  
C3-3



- TO INSTALL D3286-1/3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

**SECTION C-C** C6-4  
PARTIAL SECTION  
SCALE NONE



**SECTION D-D** A4-2  
A4-3  
FOR Ø0.375 HOLES ONLY  
SCALE NONE

- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. CBORER TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

DESIGN	91	<b>DART AEROSPACE USA, INC</b>	
DRAWN	91	PORT HADLOCK, WA	
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MFG. APPR.	91	D3804	SHEET 4 OF 5
APPROVED	91	TITLE	SCALE
DE APPR.	91	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

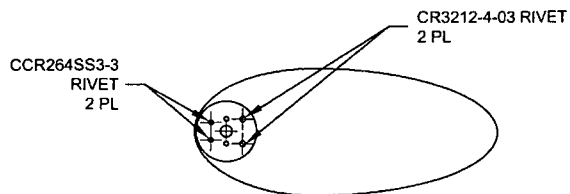
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

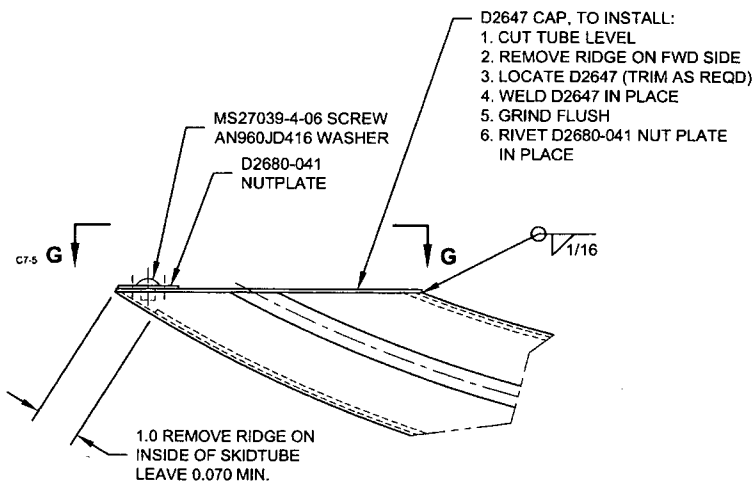


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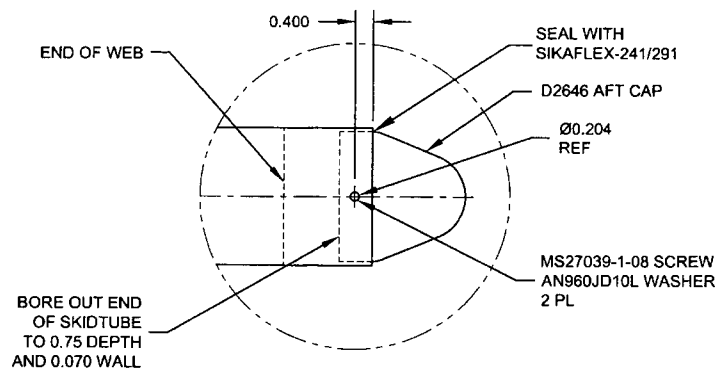
RELEASED  
07.03.07



**VIEW G-G**  
SCALE NONE  
A7-5



**DETAIL E**  
SCALE NONE  
B7-2  
B7-3



**DETAIL F**  
SCALE NONE  
B2-2  
B2-3

DESIGN	97	<b>DART AEROSPACE USA, INC</b>	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
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DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 281

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: 77988  
Part number: A206-C42-151  
Description: SKD7.6  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier David Nunez Date of Test Coupon 12.01.23  
Welder Barclay Elliot Date of Test Coupon 12.24.23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld